National Institute of Environmental Health Sciences

The economics of health and climate change: Key evidence for decision making

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Year: 2011
Journal: Globalization and Health. 7 (1): 18

Abstract:

BACKGROUND: In responding to the health challenges of climate change, those responsible for health policies and resource allocations need to know the resource consequences of their decisions. This article examines the availability and strength of economic evidence for policy makers to draw on in making health policy decisions. METHODS: Relevant literature was obtained using a Medline and INTERNET search of key terms and institutions working in health and climate change. Eighteen available economic studies are presented under three categories of economic evidence: health damage cost, health adaptation cost and health economic evaluation. RESULTS: In economic studies valuing the predicted increased mortality from climate change, the health damages represent an important fraction of overall economic losses. Similarly, when considering broader health protection measures beyond the health sector (e.g. agriculture, water supply) health considerations are central. Global adaptation cost studies carried out so far indicate health sector costs of roughly US$2-5 billion annually (mid-estimates). However, these costs are expected to be an underestimate of the true costs, due to omitted health impacts, omitted economic impacts, and the costs of health actions in other sectors. No published studies compare the costs and benefits of specific health interventions to protect health from climate change. CONCLUSIONS: More economic studies are needed examining the costs and benefits of adaptation measures to inform policy making. There is an urgent need for climate change-specific health economic guidelines to ensure robust methods are used, giving comparable results. Broader advocacy and focused training of decision makers is needed to increase the uptake of economic evidence in decision making. Until further climate change-specific economic studies have been conducted, decision makers should selectively draw on published studies of the costs and benefits of environmental health interventions.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3148969

Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☑

audience to whom the resource is directed

Policymaker

Early Warning System: ☒

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure : ☒

weather or climate related pathway by which climate change affects health

Air Pollution, Food/Water Security, Food/Water Security, Temperature

Air Pollution: Particulate Matter, Other Air Pollution

Air Pollution (other): SO2; NOx

Food/Water Security: Agricultural Productivity, Fisheries, Nutritional Quality

Temperature: Extreme Cold, Extreme Heat

Geographic Feature: ☒

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☒

resource focuses on specific location

Global or Unspecified

Health Co-Benefit/Co–Harm (Adaption/Mitigation): ☒

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Dermatological Effect, Infectious Disease, Mental Health/Stress, Morbidity/Mortality

Infectious Disease: Airborne Disease, Foodborne/Waterborne Disease, Vectorborne Disease

Airborne Disease: General Airborne Disease

Foodborne/Waterborne Disease: General Foodborne/Waterborne Disease, Other Diarrheal Disease

Vectorborne Disease: Mosquito-borne Disease, Tick-borne Disease

Mosquito-borne Disease: Dengue, Malaria

Tick-borne Disease: Tick-borne Encephalitis

Mental Health Effect/Stress: Stress Disorder

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation, Mitigation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Cost/Economic, Exposure Change Prediction, Methodology, Outcome Change Prediction

Resource Type: ☑

format or standard characteristic of resource

Review

Timescale: ☑

time period studied

Medium-Term (10-50 years)